The following diseases have characteristic features and may be diagnosed by this method:

1. *Celiac Disease,* childhood and adult, which reveals a flat mucosa without villi, damaged surface epithelium and a variable increase in plasma cells and lymphocytes in the lamina propria. (It is not specific for this entity, since the same lesion may be noted in a patchy fashion in patients with radiation enteritis, dermatitis herpetiformis, after treatment with MER-29 and in some instances of dysglobulinemia.)

2. *Whipple's disease,* due to an organism invading the mucosa, reveals a dense infiltration of the lamina propia with macrophages laden with glycoprotein material, giving the appearance of "foamy cells." Histological diagnosis may be confirmed by positive staining with PAS.

3. *A-beta-lipoproteinemia,* an hereditary disorder, revealed by vacuolated epithelial cells in the upper third of the villi which are stuffed with triglyceride.

4. *Agammaglobulinemia,* characterized by the absence of plasma cells in the lamina propria. The mucosa may be flat or have a normal villous architecture.

5. *Parasitic disease.* Specifically, giardia lamblia may be found attached to the surface of the villous or located in the intervillous spaces. Various forms of coccidia (Isospora belli) may be found in epithelial cells.

Nonspecific findings which may be present in a number of disease entities include clubbing of the villi, eosinophilic infiltration, and lacteal dilatation, the latter being characteristic of diseases in which the lymphatic channels are obstructed.

Rarely, lymphoma mastocytosis, amyloidosis, and granulomous disease such as regional enteritis may be diagnosed in random specimens.

MARVIN SLEISENGER, M.D.

REFERENCES

Rubin CE, Dobbins WO III: Peroral biopsy of the small intestine: A review of its diagnostic usefulness. Gastroenterology 49:676-697, Dec 1965

Rubin CE, Eidelman S, Weinstein WM: Sprue by any other name. Gastroenterology 58:409-413, Mar 1970

Trier JS: Current concepts: Diagnostic value of peroral biopsy of the proximal small intestine. N Engl J Med 285:1470, Dec 23, 1971

Role of Properdin in Kidney Diseases

The properdin system, first described by Pillemer and coworkers, was shown to combine with zymosan with inactivation of the third component of complement without significant inactivation of the earlier components of complement. However, there has been some controversy over the exact biological role of properdin.

Recently, Gewurz et al demonstrated that serum levels of properdin were uniformly decreased in patients with acute glomerulonephritis and in about half of patients with chronic membranoproliferative glomerulonephritis with hypocomplementemia. Westberg et al performed immunofluorescent studies on various immunologic kidney diseases with antiserum to purified properdin. All patients with acute post-streptococcal glomerulonephritis and chronic membranoproliferative glomerulonephritis had deposition of properdin and C3 in the glomeruli often without immunoglobulins. The deposition of properdin and C3 was seen as "humps" or in a lobular pattern on the basement membrane of the glomeruli.

Activation of C3 by the properdin system without antibody may explain normal levels of the earlier components of complement in the serum and the deposition of C3 often without immunoglobulins in kidneys of patients with acute glomerulonephritis or chronic membranoproliferation glomerulonephritis.

ROBERT M. NAKAMURA, M.D.

REFERENCES

Gewurz H, Pickering RJ, Naff GB, et al: Decreased properdin activity in acute glomerulonephritis. Int Arch Allergy Appl Immunol 36: 592-598, 1969

Westberg NG, Naff GB, Boyer JT, et al: Glomerular deposition of properdin in acute and chronic glomerulonephritis with hypocomplementemia. J Clin Invest 50:642-649, Mar 1971

Significance of Mitochondrial Antibody Test

The mitochondrial antibody found in serum of human patients can be demonstrated by an indirect immunofluorescent test, currently used in clinical laboratories.